North Carolina Department of Environment and Natural Resources
Division of Water Resources

LOCAL WATER SUPPLY PLAN INSTRUCTIONS

Please note: In these Instructions, certain questions refer to *the reporting year*. *The reporting year* references the year of data being reported. For example: If the reporting year is 2012, all information supplied should pertain to data collected from January 1 – December 31, 2012.

Section 1: System Information

Contact Information

Water System Name	Provide the water system's name.
PWSID#	The Public Water System IDentification number (PWSID#) is the system identification number designated by the Division of Environmental Health (DEH).
Contact Person **Title**	Provide the name of the person responsible for the local water system and their title. The contact person should be the person most able to answer questions about information submitted in the plan.
Mailing Address, City, State, Zip	Provide the address that is used for correspondence.
Phone **Fax**	Provide current telephone and fax numbers that can be used to contact the local water system.
Email	Provide an email address that is accessible by the local water system. The purpose of the email address is to keep the system and its primary contact person up to date with the latest news and information. If the system has several emails, the address you provide should be the best email with which to contact the system and the contact person.
Type of Ownership	Provide the type of water system ownership as designated by the Division of Environmental Health (DEH).

Distribution Information

Distribution Lines: For each type of water line material in your system, indicate the size range and estimated percentage of this line type present in the system. Sizes should be entered to the nearest whole percentage only. The estimated percentages of all line types used in the system should total 100%.

What are the estimated total miles of water lines?

Did the system replace any water lines in the reporting year? If so, provide the amount of lines replaced, in linear feet.

Did the system add any water lines in the reporting year? If so, provide the amount of mains added, in linear feet.

How many meters were replaced in the reporting year?

Provide the approximate age of the oldest meters in operation in the system.

Does the reporting system have any meters used solely for outdoor water use, such as irrigation, which are not billed for sewer services? If so, provide the number of outdoor meters in operation.

Provide the system's total finished water storage capacity, in million gallons (MG), including all ground level or elevated storage tanks.

Has the reporting system experienced inadequate water pressure in any part of the system since its last plan update? If so, describe the circumstances for the inadequate water pressure, what measures have been taken to correct the pressure issue, or what measures are being discussed to resolve the issue. Use the Note space provided.

If any of the answers provided about the system's distribution require more detail, or if there are any relevant details not specifically addressed in the above questions, please use the Note space provided.

Programs

Does the reporting system have a program to exercise or flush hydrants? If so, what is the hydrant flushing schedule (daily, weekly, monthly, semi-annually, annually, etc.)?

Does the reporting system have a valve exercise program? If so, what is the valve exercise schedule (daily, weekly, monthly, semi-annually, annually, etc.)?

Does the reporting system have a meter replacement program?

Does the reporting system have a cross-connection control (i.e. backflow prevention) program?

Does the reporting system have a plumbing retrofit program to replace older, higher water-use plumbing fixtures?

Does the reporting system have an active public water conservation education program?

Does the reporting system have a leak detection program? If yes, describe the program in the Note space provided.

If any of the answers provided about the programs require more detail, or if there are any relevant details not captured in the above questions, please use the Note space provided.

Water Conservation

List any and all applicable rate structures the system uses to bill its customers for water usage.

If this system uses reclaimed water, list the approximate average daily amount used and provide the number of connections that use the reclaimed water. If this system does not currently use reclaimed water, simply enter 0 (zero) in the space provided.

Indicate whether this system has an interconnection with another system that is capable of providing water to this system in an emergency. If this system does not have such an interconnection, provide a brief explanation of what steps are being taken to establish an interconnection or why it is not feasible or necessary for this system to have an emergency source of water.

All water systems that are required to prepare a Local Water Supply Plan must submit a Water Shortage Response Plan that is consistent with the provisions of administrative rule 15A NCAC 02E .0607. A copy of the rule is available on the Division's webpage or can be requested by contacting the Division at lwsp@lists.ncmail.net or (919) 707-9000.

If any of the answers provided about the system's conservation measures require more detail, or if there are any relevant details not specifically addressed in the above questions, please include that information in the Note space provided.

Section 2: Water Use Information

Service Area

Provide the population served by the system in the reporting year.

> Year round population is the population directly served by the water system in the reporting year. If water is sold to another system, the population for that system should <u>not</u> be included because the purchasing system will provide that information for their service population.

Provide the seasonal population served by the system in the reporting year (if applicable).

> Seasonal population includes year-round population plus the additional population served by the system during seasonal population changes.

If the system experiences increased usage due to seasonal population changes, indicate which months typically exhibit the seasonal fluctuations by circling them.

List all river sub-basins in which the service area is located in order of largest area to smallest area. Use the river basin designations shown on the map in Appendix A of these instructions.

> For systems that lie within a single basin, the percentage of year round population served within that basin is 100%.
>
> For systems that lie across more than one basin, the percentage of year round population should correspond to the

proportion of your service population in each basin listed. While it is important to be as accurate as possible, estimations are acceptable.

List all counties in which the service area is located in order of largest to smallest.

For systems that lie within a single county, the percentage of year round population served within that county is 100%.

For systems that lie across more than one county, estimate the percentage of year round population in each county listed.

If this system has acquired another system since the last update, list the acquired system(s) by their DEH designated name and PWSID.

If the data contained in this report includes water systems that had separate Local Water Supply Plans in previous years, please indicate in the note field which former plans and former water systems are included in this report.

With the system reporting form, include a map of the water system showing: 1) the water service area, 2) points of intake and discharge, 3) wells, 4) water and wastewater treatment facilities, and 5) water and wastewater interconnections with other systems. Also, show any future points of intake or discharge, wells, water and wastewater facilities, water and wastewater interconnections, and planned service area extensions. Use the symbols and colors below to label points of interest on the map.

Water Treatment Plants	Surface Water Intakes	Ground Water Well	Finished Water Connection	Wastewater Connection	Wastewater Discharge
Blue	Blue	Green	Black	Black	Red

If any of the answers provided about the service area require more detail, or if there are any relevant details not specifically addressed in the above questions, please include that information in the Note space provided.

Water Use by Type

Complete the table with the appropriate data for the reporting year.

Residential Water Use: May include: Boarding houses, Family care homes, Guest houses, Home occupations, Home professional offices, Manufactured Homes, Manufactured Home Parks, Multi-family dwellings, Planned unit developments, Residential accessory uses, Single-family dwellings, Vacation homes, Two-family dwellings (duplex), Three-family dwellings (triplex), etc.

Commercial Water Use: May include: Animal hospitals, Automobile repairs, Automobile sales, Automobile service stations, Banks, Barber/beauty shops, Business offices, Bus Stations, Butcher shops, Cab stands, Convenience stores, Dental clinics, Exterminators, Farms, Farm machinery showrooms, Fish markets, Funeral homes, Golf courses, Hardware stores, Hotels, Kennels, Laundry/dry cleaning storefronts, Medical clinics, Mobile home showrooms, Motorcycle showrooms, Nurseries, Paint/wallpaper showrooms, Parking lots, Pet shops, Print shops, Professional service agencies, Radio/TV repair shops, Recreational vehicle sales and service, Restaurants, Retail stores, Seed/feed stores, Shoe repair shops, Specialized service agencies, Studios (art, photo, design, etc.), Television or radio broadcast stations, Theaters, Train stations, etc.

Industrial Water Use: May include: Manufacturing Facilities, Processing Facilities, Utilities, etc.

Institutional Water Use: May include: Hospitals, Assisted living facilities, Correctional facilities, Schools, Colleges, Churches, Government buildings, Police stations, etc.

Estimate, or calculate if possible, the amount of water used for system processes, in MGD.

System process water includes any water used in water system processes, such as backwash water, water used in the treatment processes that is not sent to the distribution system and water that is needed to maintain water quality in the distribution system.

If any of the answers provided about the various types of use require more detail, or if there are any relevant details not specifically addressed in the above questions, please include that information in the Note space provided.

Water Sales to Other Water Systems

List all of the water systems that your water system **is** interconnected with (for regular and emergency use), whether currently in use or not. Remember to mark the locations of all water interconnections on the System Map. For each connection please provide the following information.

Water System	List the interconnected water system's name.
PWSID	List the interconnected water system's PWSID number.
Average Daily Amount	List the average daily amount supplied in MGD, and number of days sold in the reporting year for each interconnection. If no water was supplied in the reporting year, enter 0 (zero) in the space provided.
Contract	List the contract amount in MGD, and the year the contract expires for each interconnection. If the contract amount is unknown, leave the space blank. Indicate if it is a recurring contract.
Restriction Compliance	Indicate whether your system requires that the water system purchasing water adheres to the same level of water use restrictions that your system's customers are requested to follow.
Pipe Size(s)	List the pipe size(s) in inches, for each interconnection.
Regular or Emergency Use?	Indicate whether each interconnection is for regular or emergency use. If water is typically supplied to a system for 30 or more days per year, the sale is considered "regular use."

If any of the answers provided about water sales to other systems require more detail, or if there are any relevant details not specifically addressed in the above questions, please include that information in the Note space provided.

Section 3: Water Supply Sources

Monthly Withdrawals and Purchases

Provide the average daily and maximum day water withdrawals and purchases for each month. Be sure to include **all** water withdrawn from all sources plus water purchased.

If any of the answers provided about monthly withdrawals and purchases require more detail, or if there are any relevant details not specifically addressed in the above question, please include that information in the Note space provided.

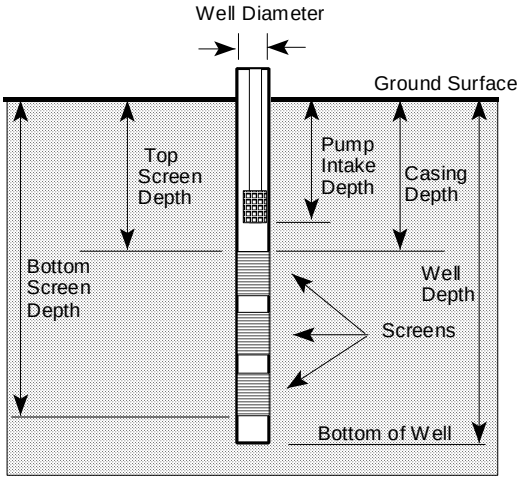
Ground Water Source(s)

Mark the locations of all ground water sources on the System Map.

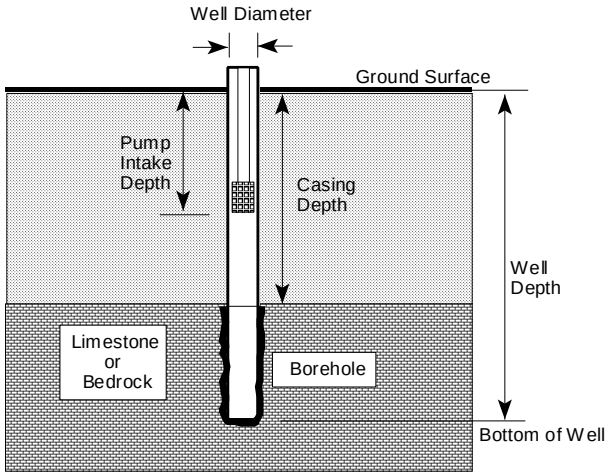
Well Name/Number	Provide an identifying name or number for each well listed.
Average Daily Withdrawal	Provide the average daily withdrawal, in MGD, and the number of days each well was used during the reporting year.
Maximum Day Withdrawal	Provide the maximum day withdrawal in MGD, for each well used during the reporting year. If a maximum day withdrawal amount is not available, leave the space blank.
12-Hour Supply	Provide the 12-Hour supply available for each well, in MGD.
CUA Reduction	If your system is in the Central Coastal Plains Capacity Use Area (CCP CUA), each well has been identified as being in a designated reduction zone (0%, 10%, or 25%). Indicate which CUA Reduction applies to each well. These designations should be contained in your system's previous LWSP.
Year Offline	Provide the projected year the listed well will be taken out of service. If this is not applicable to the well, leave the space blank.
Regular or Emergency Use?	Indicate whether each well is for regular or emergency use. If a well is typically used for 30 or more days per year, it is considered "regular use."

Well Depth / Casing Depth / Screen Depth / Well Diameter / Pump Intake Depth	Provide the well depth, casing depth, screen depth, well diameter and pump intake depth for each well listed (See the well diagram below for additional guidance).
Is Well Metered?	Indicate if each well is metered.

Refer to the typical well diagrams below to help identify the measurements requested in the Ground Water Source(s) Tables.



Well with Screens



Well without Screens

Indicate if the ground water levels for the system are monitored, and if so, the monitoring frequency (daily, weekly, monthly, etc.).

> Monitoring ground water levels differs from metering withdrawals. Source monitoring for the Division's purposes entails tracking the groundwater table as it is influenced by well withdrawals and climatic changes.

Does this system have a wellhead protection program?

> A wellhead protection program helps communities protect their public drinking groundwater supplies through pollution prevention and management. A wellhead protection program includes delineation, contaminant source inventory, and source management.

If any of the answers provided about groundwater sources require more detail, or if there are any relevant details not specifically addressed in the above questions, please include the information in the Note space provided.

Surface Water Source(s)

Mark all locations of surface water intakes on the System Map.

> Reservoirs and run-of-river intakes are the two basic types of surface water supplies. On-stream reservoirs impound water during high flow periods for later use when stream flows would otherwise be insufficient to meet demand. Run-of-river intakes simply withdraw some of the water in a stream or river as it flows by. Systems with a run-of-river intake may have an off-stream raw water storage reservoir to provide water when withdrawals from the river may be limited.

Stream	List the name of the stream from which water is withdrawn or that feeds your reservoir.
Reservoir	List the name of the reservoir from which water is withdrawn.
Average Daily Withdrawal	Provide the average daily withdrawal in MGD and the number of days each water source was used in the reporting year.
Maximum Day Withdrawal	Provide the maximum day withdrawal in MGD, for each source during the reporting year. If a maximum day withdrawal amount is not available, leave the space blank.

Available Raw Water Supply	What is the system's available raw water supply and qualifiers for each source listed?
Qualifier*	What is the available raw water supply based on?

*The qualifiers are: **C**=Contract amount, **SY20**=20-year safe yield, **SY50**=50-year safe yield**, F**=20% of 7Q10 or other instream flow study/requirements, **CUA**=Capacity Use Area Permit. If your system has requirements for minimum releases from a reservoir or to maintain minimum levels of flow below its intake, Please describe these requirements in the Note section. Typically a drought event with a 20-year recurrence interval (SY20) or 50-year recurrence interval (SY50) is used as a design parameter for a surface water supply. The SY20 is the allowable withdrawal the source can provide on the average every year except one in 20 years. For systems serving less than 50,000 people, a SY20 analysis may be adequate. The volume of water that can be supplied on average for every year except one in 50 years, a SY50analysis, is recommended.

The water supply from a reservoir owned by the system should be based on the SY20 or SY50 yield analysis. If the yield is unknown, supply is assumed to be equal to the approved water treatment plant capacity.

For a reservoir not owned by the system, supply is based on the contract amount or agreement the system has with the owner to withdraw water from the reservoir. If the contract amount is unknown, supply is assumed to be equal to the approved water treatment plant capacity.

For a system with a run-of-river intake, supply from the river intake should be designated by:

- 20 percent of the 7Q10 low-flow at the intake,
- Withdrawal criteria based on an instream flow study, or the
- Existing permitted water treatment plant capacity.

If you do not have the results of an instream flow study on which to base available supply, for planning purposes you can use 20 percent of the 7Q10 as an estimate. However, this value is only a threshold for triggering the North Carolina Environmental Policy Act. A site-specific analysis for increasing withdrawals could determine an acceptable withdrawal greater than 20 percent of the 7Q10.

Additional information about water source yields is available from the Division of Water Resources web site (http://www.ncwater.org/) or by calling (919) 707-9000.

Usable On-Stream Raw Water Supply Storage	Provide the usable supply in MG, for any on-stream raw water reservoir, if applicable.
Drainage Area	Provide the drainage area in square miles for each surface water intake.
Is Withdrawal Metered?	Indicate if each surface water source is metered.
Sub-Basin	Using the designations on the map in Appendix A, name the sub-basin where the surface water intake is located.
County (Intake)	Name the county where the surface water intake is located.
Year Offline	Provide the projected year the source will be taken out of service. If this does not apply, leave the space blank.
Regular or Emergency Use?	Indicate whether each intake is for regular or emergency use. If water is typically withdrawn for 30 or more days per year, the source is considered "regular use".

Provide the usable off-stream raw water supply storage in MG, if applicable.

Indicate if the usable supply in the surface water source(s) for the system are monitored, and if so, at what frequency (daily, weekly, monthly, annually, etc.).

Indicate whether the system is required to maintain minimum flows downstream of any of the system's intakes or dams. If this does not apply to your system, leave the space blank.

Surface Water Transfer: Indicate if the system currently has the ability to transfer surface water between the basins designated on the map in Appendix A. If yes provide a brief description of the transfer.

Indicate if the system anticipates utilizing a transfer of surface water between sub-basins in the future. If yes provide a brief description of the anticipated transfer.

If the answer to the question concerning the transfer of surface water between sub-basins is yes, this system is required to

complete and submit a copy of the Interbasin Transfer (IBT) worksheets to the Division of Water Resources as part of their Local Water Supply Plan. The worksheets are available on the Division's webpage or can be requested by contacting the Division at lwsp@lists.ncmail.net or (919) 707-9000.

If any of the answers provided about surface water sources require more detail, or if there are any relevant details not specifically addressed in the above questions, please provide the information in the Note space provided.

Water Purchases From Other Water Systems

List all systems that can supply water to the system through existing regular and emergency use interconnections. Next, mark locations of all listed interconnections on the System Map.

Water System Name	List the water system's name from which the reporting system purchases water.
PWSID	List the water system's PWSID from which the reporting system purchases water.
Average Daily Amount	List the average daily amount in MGD, and number of days purchased in the reporting year for each interconnection. If no water was supplied in the reporting year, enter 0 (zero) in the space provided.
Contract	List the purchase contract amount in MGD, and the year the contract expires for each interconnection. If the contract amount is unknown, leave the space blank. Indicate if it is a recurring contract.
Restriction Compliance	Indicate whether the system you purchase water from requires your system to adhere to the same level of water use restrictions they require of their customers.
Pipe Size(s)	List the pipe size(s) in inches for each interconnection listed.
Regular or Emergency Use?	Indicate whether each interconnection is for regular or emergency use. If water is typically purchased from a system for 30 or more days per year, it is considered "regular use".

If any of the answers provided about water purchases require more detail, or if there are any relevant details not specifically addressed in the above questions, please provide the information in the Note space provided.

Water Treatment Plant(s)

List all water treatment plants for the system including facilities under construction as of December 31 of the reporting year.

Water Treatment Plant Name	List the name used by the system to identify the water treatment plant.
Permitted Capacity	Provide the permitted capacity of the water treatment plant. The permitted capacity is the amount a water treatment facility is allowed to treat in any given day.
Is raw water metered?	Is raw water entering the water treatment plant metered?
Is finished water output metered?	Is finished water exiting the plant metered?
Source(s)	List the water source(s) from which raw water is withdrawn to supply each plant.

Did average daily water production exceed 80% of the approved WTP capacity for five or more consecutive days in the reporting year? If so, were any water conservation measures implemented?

Did average daily water production exceed 90% of the approved WTP capacity for five or more consecutive days in the reporting year? If so, were any water conservation measures implemented?

Are peak day demands expected to exceed the WTP capacity in the next 10 years? If so, what are the system's plans for managing water demands or increasing capacity?

If any of the answers provided about water treatment plants require more detail, or if there are any relevant details not specifically addressed in the above question, please use the Note space provided.

Section 4: Wastewater Information

Monthly Wastewater Discharge

Provide average daily wastewater discharges for each month in MGD, for the reporting year. Average daily wastewater discharges should include all NPDES permitted discharges, including permits for discharge of system process water as well as customer wastewater. Please use the Note space provided if this system only discharges wastewater through a land application permit (WQ) and reports that discharge in dry tons; do not provide monthly discharge numbers if they are only in dry tons.

Provide the total number of sewer service connections within the system. If not applicable, leave this space blank.

The total number of sewer service connections includes all residential, commercial, industrial, and institutional customers who are connected and discharge to the system's sewer system.

Provide the total number of water service connections with septic systems within the system. If not applicable, leave space blank.

The total number of water service connections with septic systems includes all residential, commercial, industrial, and institutional customers who do not or chose not to use the system's sewer system, and instead rely on septic systems.

Are there plans to build or expand the system's wastewater treatment facilities in the next 10 years? If so, please describe the development or expansion of the system's wastewater system in the Note space provided.

If any of the answers provided about wastewater discharge require more detail, or if there are any relevant details not specifically addressed in the above questions, please use the Note space provided.

Wastewater Permits

List all wastewater discharges and/or land application permits for this system. Mark the discharge locations on the System Map.

NPDES or Land Application Permit Number	List all NPDES (NC) or Land application (WQ) permits for this system.
Permitted Capacity on Dec. 31	Provide the permitted capacity, as of December 31 of the reporting year for each permit.
Design Capacity	Provide the design capacity, as of December 31 of the reporting year for each permitted facility.
Average Annual Daily Discharge	Provide the average annual daily discharge amount in MGD for each permit.
Maximum Day Discharge	Provide the maximum day discharge amount in MGD for each permit.
Receiving Stream	Provide the name of the receiving stream for each NPDES permit. For land application permits, indicate "Land Application" in this column.
Sub-Basin	In which sub-basin is the point of discharge or land application site located? Use the basin designations on the map included in Appendix A of these instructions.

Wastewater Interconnections

List all wastewater interconnections with other systems and mark their locations on the System Map.

Water System	Provide the names of the systems with which this system has a wastewater interconnection.
PWSID	Provide the PWSID of the systems with which this system has a wastewater interconnection.
Were you discharging or receiving wastewater?	Did this system discharge to or receive wastewater from the interconnected system in the reporting year?
Average Daily Amount	For each wastewater interconnection, provide the average daily amount of wastewater exchanged in the reporting year in MGD.
Days Used	For each wastewater interconnection, provide the number of days wastewater was exchanged in the reporting year.
Contract Maximum	List the contract maximum in MGD for each wastewater interconnection.

If the contract maximum is unknown, leave the space blank.

Section 5: System Planning

Projections

Systems with recently completed Local Water Supply Plans may have already projected their service populations for the years 2020, 2030, 2040, 2050 and 2060. Carefully review these projections and update them as necessary. Please explain methodology and reasons for new projections if they are different from those in your system's previous LWSP.

Some factors to consider in projecting population served by your water system include:

- anticipated water main extensions and expansions to the water service boundaries
- increases in the population served within the existing water system service areas.

In addition to residential growth, water demand projections should take into consideration expected growth in industrial, commercial, and institutional customers that may be served by your public water supply system.

Provide estimates of the amount of water needed to meet expected needs for residential, commercial, industrial, institutional and system process water as well as an estimate of future unaccounted-for water for 2020, 2030, 2040, 2050 and 2060.

Projections are a crucial element of water supply planning. If any of the projection information requires more detail, or if there are any relevant details not specifically addressed in the above questions, please use the Note space provided.

Future Sales Contracts

List all of the water systems with which your water system intends to establish future regular and emergency sales contracts, whether or not the physical connection is currently in place. Remember to mark the locations of all future water interconnections on the System Map.

Water System	List the water system's name for the proposed sales contract.
PWSID	List the water system's PWSID number for the proposed sales contract.
Contract Amount and Duration	List the expected contract amount in MGD, the year the contract is scheduled to begin and the year the contract is anticipated to expire for each interconnection. If the anticipated expiration year is unknown or if it is to be a recurring contract, leave the space blank.
Pipe Size(s)	List the anticipated pipe size(s) in inches, for each interconnection that will be used for the proposed sale.
Regular or Emergency Use?	Indicate whether each proposed sales contract will be for regular or emergency use. If water will be supplied to a system for 30 or more days per year, the sale would be designated "regular use."

If any of the answers provided about future water sales contracts to other systems require more detail, or if there are any relevant details not specifically addressed in the above questions, please include the information in the Note space provided.

Future Sources of Additional Supply

List all increases in available supply that are being proposed for the system. Include additional purchases from other systems as well as surface water intakes or wells. Mark the locations of all future sources on the System Map.

Source or Water System Name	List the Source Name that is intended to be a future supply or the water system's name from which the reporting system intends to purchase water.
PWSID	Indicate the PWSID of any water system from which the reporting system intends to purchase water. If the future source will be a ground or surface water supply owned by your system, enter your system's PWSID.
Source Type	Indicate the type of future source: Ground, Surface, or Purchase.

Additional Supply	List the additional supply, in MGD, that the future source is anticipated to add to your system.
Year Online	Provide the year that the future source is expected to be functional.
Regular or Emergency Use?	Indicate whether each proposed future supply will be for regular or emergency use. If water will be supplied to a system for 30 or more days per year, the source would be designated "regular use."

If any of the answers provided about future sources of supply require more detail, or if there are any relevant details not specifically addressed in the above questions, please include the information in the Note space provided.

Plan for Meeting Future Water Supply Needs

The section is designed to help local governments manage water demand and supply. If the water system's average daily demand will exceed eighty percent (80%) of available supply by the year 2040, **or** if the seasonal demand of a system serving a seasonal population exceeds ninety percent (90%), specific details about the system's plans to meet future water supply needs will be required. The water system must address each of the following:

I. Reduction of Future Supply Needs through Demand Management
Demand management practices ensure efficient use of a water system's available water supply. Identify and describe what practices your water system will implement to reduce your future supply needs. Options include, but are not limited to:

a) Performance of a detailed water audit
   - Annual monitoring for meter accuracy
   - Targeting of large water users for increased efficiency
b) Evaluation of rate structure
   - Review actual cost of providing water and system maintenance
c) Leak detection and unaccounted-for water reduction
d) Evaluation of reclaimed water to meet non-potable water needs
e) Implementation of a water conservation program
f) Upgrades to distribution system

If the plans for meeting future water supply are not implemented when demands exceed 80% (or 90%) of available supply, a water system may need to consider restrictive measures to control demand such as;

g) Placing a moratorium on additional water connections until the additional supply is available.
h) Amending or developing your water shortage response ordinance to trigger mandatory water conservation as water demand approaches the available supply.

II. Development of Additional Supply to Meet Future Supply Needs
Plans for obtaining additional water supply can reduce overall demand before it exceeds 80% (or 90%) of available supply. The sooner the additional supply will be needed, the more specific a water system's plans need to be. Depending upon water sources available to a system, options can include, but are not limited to:

Groundwater Supply:
i) Construction of additional wells
j) Well rehabilitation

Surface Water Supply:
k) Evaluation of in-stream flow
l) Increase intake capacity
m) Upgrade or expand the water treatment plant

Purchased Water Supply:
n) Negotiate an increase in an existing purchase contract
o) Establish a new interconnection with another system for the purpose of buying water
p) Negotiate a new purchase contract with any neighboring system

III. Implementation of Demand Management and Supply Development Plans
Demand management practices and the development of additional water supply require significant planning and resources from a water system in order to be properly implemented. Based on your water system's plans to meet future water supply needs (Sections I. and II.), provide specific details regarding what will be necessary for implementation. Consider:

1) Estimation of time for plan completion
2) Development of drawings and required documents
3) Permitting
4) Contract negotiations
5) Construction
6) Staff training
7) Funding (loans, grants, bonds, or other legally binding commitments)

Additional Information

Indicate whether this system has participated in regional water supply or water use planning.

Regional water supply planning is when two or more systems work together to utilize the same sources of water for mutual benefit.

List the major water supply reports or studies used for planning.

Water Supply reports developed by third party consultants for specific system improvements, calendar year billing reports, and past Local Water Supply Plan Updates, are just a few examples of the many types of reports that you can utilize for the completion of this reporting form.

This question provides the opportunity for the system to comment on any other needs or issues regarding the water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.), or the system's ability to meet present and future water needs. The reporting system should include both quantity and quality considerations, as well as financial, technical, managerial, permitting and compliance issues when responding to this question.

Section 6: Report Submission

Plan Preparer Information

Complete the plan preparer information section if the preparer of the Local Water Supply Plan Reporting Form is not the same person listed in the water system contact information as the primary contact responsible for the local water system.

Preparer Name **Title**	Provide the name of the person responsible for completing the local water supply reporting form. This should be the person who completed the plan and can answer questions about the information provided.
Mailing Address, City, State, Zip	Provide an address that may be used to communicate with the preparer of the local water supply plan.
Phone **Fax**	Provide current telephone and fax numbers to be used to contact the preparer.
Email	Provide an email address that is accessible by the preparer.

Final Copy

Please make a copy of this reporting form for your records. Submit one copy of this reporting form along with a system map, water shortage response plan, interbasin transfer worksheets (if applicable) and any additional information to the Division of Water Resources using either the online reporting system, email, or mail. Upon receipt, the Division will review the materials provided to assure they are complete and meet the requirements of the North Carolina General Statute 143-355(l). If any information is unclear or if additional information is required, a Review Engineer will contact the plan preparer or system contact for further details.

Demand as Percent of Supply

The information provided in the reporting form is used to complete the Demand as Percent of Supply Summary Worksheet. The Summary is designed to help local governments manage water demand and supply. If the system's average daily demand will exceed 80% of available supply by the year 2040, specific details about the system's future plans will be required and should include the following:

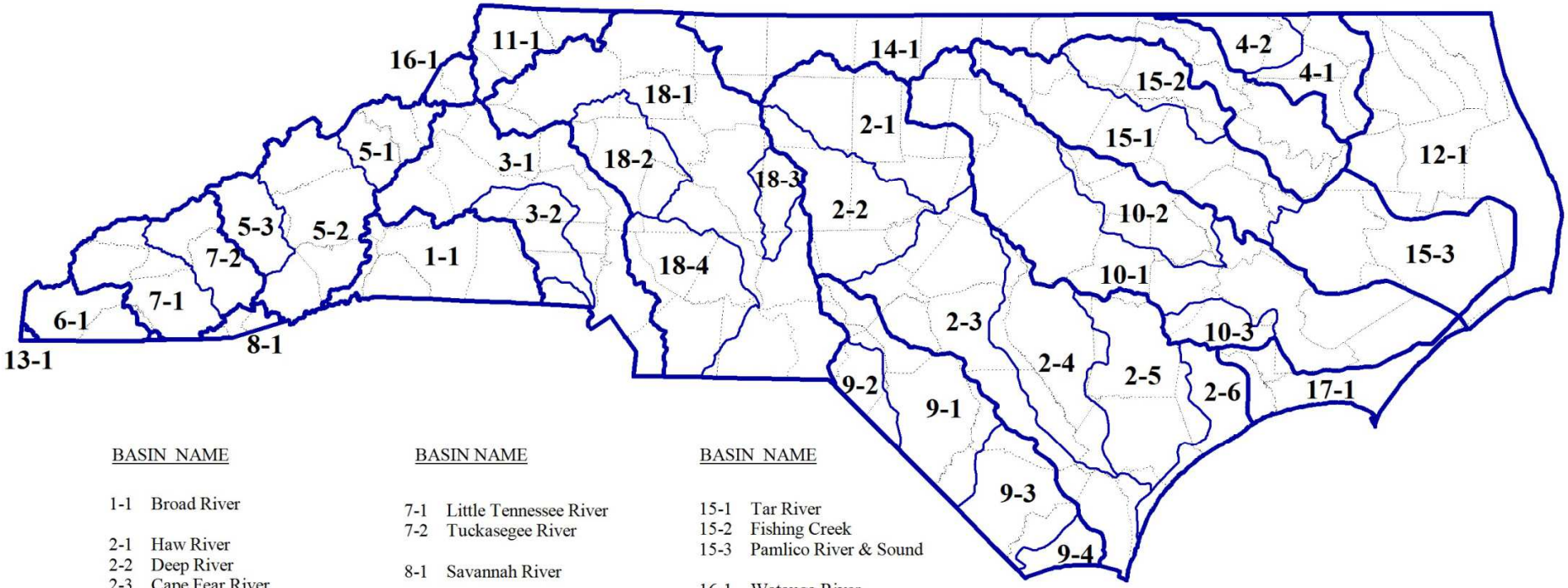
(1) A demand management program to ensure efficient use of your available water supply (for example, conducting water audits at least annually to closely monitor water use; targeting large water customers for increased efficiency; modifying water rate structures; identifying and reducing the amount of leaks and unaccounted-for water; and reusing reclaimed water for non-potable uses).

(2) Restrictive measures to control demand if the additional supply is not available when demand exceeds 80% of available supply, including:
- Placing a moratorium on additional water connections until the additional supply is available.
- Amending or developing your water shortage response ordinance to trigger mandatory water conservation as water demand approaches the available supply.

(3) Plans for obtaining additional water supply before demand exceeds 80% of available supply. The sooner the additional supply will be needed, the more specific your plans need to be.

The Division will notify you when your Local Water Supply Plan Update is complete and can be approved by your local governing body. Please call (919) 707-9000 or email us at lwsp@lists.ncmail.net if you have any questions about this form.

APPENDIX A: Major River Basins & Sub-Basins in North Carolina



BASIN NAME

1-1 Broad River

2-1 Haw River
2-2 Deep River
2-3 Cape Fear River
2-4 South River
2-5 Northeast Cape Fear River
2-6 New River

3-1 Catawba River
3-2 South Fork Catawba River

4-1 Chowan River
4-2 Meherrin River

5-1 Nolichucky River
5-2 French Broad River
5-3 Pigeon River

6-1 Hiwassee River

BASIN NAME

7-1 Little Tennessee River
7-2 Tuckasegee River

8-1 Savannah River

9-1 Lumber River
9-2 Big Shoe Heel Creek
9-3 Waccamaw River
9-4 Shallotte River

10-1 Neuse River
10-2 Contentnea Creek
10-3 Trent River

11-1 New River

12-1 Albemarle Sound

13-1 Ocoee River

14-1 Roanoke River

BASIN NAME

15-1 Tar River
15-2 Fishing Creek
15-3 Pamlico River & Sound

16-1 Watauga River

17-1 White Oak River

18-1 Yadkin River
18-2 South Yadkin River
18-3 Uwharrie River
18-4 Rocky River

Legend

- Major River Basin Boundary
- Sub-Basin Boundary
- County Boundary

Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699 – 1611

Tel: (919) 707-9000
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Web: http://www.ncwater.org

APPENDIX B: PERSON PER DWELLING UNIT BY COUNTY

(Source: Office of State Planning, NC Department of Administration May 2002)

YEAR	1980	1990	2000	YEAR	1980	1990	2000
ALAMANCE	2.71	2.47	2.46	JOHNSTON	2.78	2.55	2.58
ALEXANDER	2.91	2.64	2.54	JONES	3.03	2.70	2.53
ALLEGHANY	2.64	2.41	2.28	LEE	2.81	2.59	2.61
ANSON	3.03	2.71	2.59	LENOIR	2.80	2.54	2.43
ASHE	2.77	2.48	2.31	LINCOLN	2.87	2.65	2.62
AVERY	2.79	2.52	2.34	MCDOWELL	2.83	2.56	2.28
BEAUFORT	2.82	2.58	2.42	MACON	2.59	2.34	2.34
BERTIE	3.05	2.74	2.53	MADISON	2.72	2.48	2.53
BLADEN	2.98	2.62	2.45	MARTIN	2.98	2.66	2.45
BRUNSWICK	2.87	2.52	2.38	MECKLENBURG	2.69	2.50	2.49
BUNCOMBE	2.61	2.40	2.33	MITCHELL	2.74	2.47	2.37
BURKE	2.74	2.51	2.48	MONTGOMERY	2.86	2.69	2.61
CABARRUS	2.77	2.59	2.6	MOORE	2.67	2.43	2.38
CALDWELL	2.88	2.57	2.48	NASH	2.83	2.60	2.54
CAMDEN	3.02	2.70	2.58	NEW HANOVER	2.69	2.43	2.29
CARTERET	2.66	2.43	2.31	NORTHAMPTON	3.03	2.64	2.44
CASWELL	3.12	2.69	2.56	ONSLOW	2.96	2.84	2.72
CATAWBA	2.77	2.55	2.51	ORANGE	2.49	2.34	2.36
CHATHAM	2.75	2.51	2.47	PAMLICO	2.83	2.49	2.38
CHEROKEE	2.74	2.50	2.32	PASQUOTANK	2.79	2.63	2.52
CHOWAN	2.85	2.59	2.48	PENDER	2.91	2.56	2.49
CLAY	2.66	2.44	2.25	PERQUIMANS	2.85	2.58	2.42
CLEVELAND	2.88	2.59	2.53	PERSON	2.93	2.61	2.5
COLUMBUS	2.92	2.65	2.5	PITT	2.76	2.53	2.43
CRAVEN	2.84	2.64	2.5	POLK	2.55	2.32	2.28
CUMBERLAND	2.98	2.77	2.65	RANDOLPH	2.77	2.57	2.55
CURRITUCK	2.80	2.68	2.61	RICHMOND	2.83	2.59	2.51
DARE	2.48	2.41	2.34	ROBESON	3.19	2.85	2.75
DAVIDSON	2.80	2.56	2.5	ROCKINGHAM	2.80	2.55	2.45
DAVIE	2.85	2.55	2.51	ROWAN	2.68	2.52	2.52
DUPLIN	2.90	2.64	2.63	RUTHERFORD	2.76	2.53	2.44
DURHAM	2.61	2.40	2.4	SAMPSON	2.95	2.67	2.64
EDGECOMBE	3.01	2.75	2.67	SCOTLAND	3.02	2.76	2.61
FORSYTH	2.62	2.40	2.39	STANLY	2.73	2.57	2.53
FRANKLIN	2.91	2.61	2.58	STOKES	2.92	2.61	2.51
GASTON	2.86	2.64	2.53	SURRY	2.76	2.51	2.46
GATES	3.03	2.75	2.66	SWAIN	2.82	2.55	2.44
GRAHAM	2.91	2.59	2.35	TRANSYLVANIA	2.74	2.45	2.3
GRANVILLE	2.99	2.68	2.58	TYRRELL	2.88	2.62	2.42
GREENE	3.14	2.72	2.65	UNION	3.00	2.82	2.81
GUILFORD	2.67	2.44	2.41	VANCE	2.95	2.69	2.6
HALIFAX	2.96	2.66	2.51	WAKE	2.67	2.46	2.51
HARNETT	2.83	2.60	2.61	WARREN	3.05	2.68	2.48
HAYWOOD	2.70	2.40	2.3	WASHINGTON	3.10	2.72	2.52
HENDERSON	2.59	2.38	2.33	WATAUGA	2.56	2.37	2.26
HERTFORD	2.97	2.65	2.48	WAYNE	2.88	2.65	2.55
HOKE	3.28	2.92	2.86	WILKES	2.84	2.55	2.43
HYDE	2.89	2.57	2.36	WILSON	2.85	2.57	2.51
IREDELL	2.81	2.59	2.56	YADKIN	2.75	2.49	2.47
JACKSON	2.68	2.46	2.3	YANCEY	2.79	2.49	2.36